

Claims

Sub B3 1. An apparatus ~~for~~ securing a wiper arm, which is driven via a lever mechanism (10) that has a drive lever, connected in a manner fixed against relative rotation to the drive shaft (12), and a steering lever (22, 24, 26) connected to an axle (16, 18, 20), which are pivotably connected to a wiper lever (112), characterized in that the steering lever (22, 24, 26) is braced in (the) mounting direction (28) on a bearing shoulder (30, 32, 34) on the axle (16, 18, 20).

2. The apparatus of claim 1, characterized in that the steering lever (22, 24, 26) is braced on the bearing shoulder (30, 32, 34) via a disk (36, 38, 40).

Sub B4 3. The apparatus of claim 2, characterized in that the disk (36, 38) is pressed by positive engagement onto the axle (16, 18).

A 4. The apparatus of claim ~~2 or 3~~, characterized in that the axle (16) is joined solidly in the pivoting direction (42, 44) to the disk (36), and the disk (36) is joined by positive engagement to the steering lever (22) in the pivoting direction (42, 44).

5. The apparatus of claim 4, characterized in that the disk (36) and the steering lever (22) are connected in the pivoting direction (42, 44) via a clearance fit (120).

A 6. The apparatus of claim ~~4 or 5~~, characterized in that the steering lever (22) positively surrounds the

disk (36) in the pivoting direction (42, 44) with side walls (46, 48).

Sub B5 7. The apparatus of claim 6, characterized in that the side walls (46, 48) are embodied as merging in the mounting direction (28) from a smaller cross-sectional region (50) deviating from radial symmetry to a larger cross-sectional region (52). } 112

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8. The apparatus of ~~one of claims 1-3,~~ ^{claim 1} characterized in that the axle (20) has a cross-sectional region (54) deviating from radial symmetry, and the steering lever (26) positively surrounds the axle (20) in this region (54).

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9. The apparatus of ~~one of claims 1-3,~~ ^{claim 1} characterized in that the axle (18) has a cross-sectional region (56) deviating from radial symmetry and having a pressure piece (58), placed between the axle (18) and the steering lever (24), which pressure piece has an opening (60) embodied to suit the cross-sectional region (56) deviating from radial symmetry and positively surrounds the axle (18) and has an outer cone (62), with which it is pressed by a separable fastening element (64) on the axle (18) into a suitably shaped inner cone (66) of the steering lever (24) and is fixed jointly with the steering lever (24) in the axial direction on the bearing shoulder (32).

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10. The apparatus of ~~one of the foregoing claims,~~ ^{claim 1} characterized in that the drive lever (14) is braced in the mounting direction (28) on a bearing shoulder (68) on the drive shaft (12).

Sub B7

11. > The apparatus of claim 10, characterized in that the drive shaft (12) has at least one cross-sectional region (70) deviating from radial symmetry and having a pressure piece (72), placed between the drive shaft (12) and the drive lever (14), which pressure piece has an opening (74) embodied to suit the cross-sectional region (70) deviating from radial symmetry and positively surrounds the drive shaft (12) and has an outer cone (76), with which it is pressed by a separable fastening element (64) on the drive shaft (12) into a suitably shaped inner cone (78) of the drive lever (14) and is fixed jointly with the drive lever (14) in the axial direction on the bearing shoulder (68).

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12. The apparatus of ~~one of claims 9-11~~ ^{claim 9}, characterized in that the cross-sectional region (56, 70), deviating from radial symmetry, of the drive shaft (12) and/or the axle (18) has an increasing diameter (80, 82), at least in one region in the mounting direction (28), and the pressure piece (58, 72) is fixed without play nonpositively on the cross-sectional region (56, 70).

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13. The apparatus of ~~one of claims 9-12~~ ^{claim 9}, characterized in that the pressure piece (58, 72) and the drive shaft (12) and/or the axle (18) are connected positively via from one to twelve large, load-bearing faces (84, 86, 88, 90, 92, 94).

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14. The apparatus of ~~one of the foregoing claims~~ ^{claim 1}, characterized in that the steering lever (22, 24, 26) is a sheet-metal part.

15. The apparatus of claim 14, characterized in

that the steering lever (22, 26), in a cap side (96, 98)
around the connection point with the axle (16, 20), has
a cup-shaped indentation (100, 102).

add 78 }